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10/668,549	09/23/2003	Yuan-Chi Chang	YOR920030366US1	2911

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Ryan, Mason & Lewis, LLP
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EXAMINER

PYO, MONICA M

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/668,549	Applicant(s) CHANG ET AL.	
	Examiner MONICA M. PYO	Art Unit 2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 7-10 and 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-10 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is responsive to the Amendment filed 4/9/2008.
2. Claims 1-4, 7-10 and 21 are currently pending in this application. In the Amendment filed 4/9/2008, no claims are amended. This action is made Final.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3, 7, 9-10 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,581,056 issued to Rao (hereinafter Rao).

Regarding Claims 1 and 21, Rao discloses a method of rewriting a query during a database query processing operation, comprising the steps of:

A). processing the query having one or more target attributes (i.e., words of phrases) **in accordance with at least a portion of a data set** (i.e., a string of keywords) **producing query results** (Rao: col. 5, lns. 17-30; the results of a query which can be viewed by a user by the browsing interface 403) **comprising the one or more target attributes** (i.e., terms used in the query) **and one or more auxiliary attributes** (i.e., terms from cluster summaries or central documents but not exact cluster terms), **wherein the one or more auxiliary attributes are not included in the query**, as the SCA engine to allow the user to more easily utilize the

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information obtained by a query to formulate a more restrictive query by using various query refinement (Rao: col. 6, lns. 18-col. 7, lns. 18; figs. 3 & 5)

B). analyzing the query results with respect to the one or more target attributes and the one or more auxiliary attributes to determine a relative selectivity for the one or more auxiliary attributes, as the ephemeral SCA engine performs an augmentation on IA clients and an ephemeral collection of documents are processed to yield various indexes and index terms that will supplement query refinement (Rao: col. 5, lns. 50-col. 6, lns. 17; col. 6, lns. 60-col. 7, lns. 18); **and**

C). appending the query with at least one new predicate corresponding to at least one of the one or more auxiliary attributes having a high relative selectivity to form a rewritten query, as to an automatic procedure or the manual process to reweight, add, or remove terms in a subsequent query (Rao: col. 6, lns. 50-64).

Regarding Claim 2, Rao discloses the method wherein the at least a portion of the data set comprises sampled records from the data set (Rao: col. 4, lns. 34-54; col. 4, lns. 65-col. 5, lns. 30).

Regarding Claim 3, Rao discloses the method further comprising the step of sampling data records from the data set (Rao: col. 6, lns. 7-col. 49).

Regarding Claim 7, Rao discloses the method wherein the step of analyzing the one or more target attributes and the one or more auxiliary attributes comprises the steps of:

extracting statistics for the one or more auxiliary attributes from the query results (Rao: col. 6, lns. 18-36; Rao teaches the ephemeral statistical content analysis [SCA] engine's tokenizer [502] extracts tokens [i.e., words] by parsing the text of a document);

extracting statistics for the one or more auxiliary attributes from the at least a portion of the data set (Rao: col. 6, lns. 18-36; Rao teaches the procedure to evaluate the tokens); and

evaluating the relative selectivity for the one or more auxiliary attributes in accordance with the extracted statistics (Rao: col. 6, lns. 18-49; Rao teaches the filtering process to cause some of the tokens to be dropped out and some tokens to be combined).

Regarding Claim 9, Rao discloses the method wherein the step of appending at least one new predicate comprises the steps of:

evaluating relative selectivity for the one or more auxiliary attributes (Rao: col. 6, lns. 18-36 & 60-64);

selecting at least one auxiliary attribute with a high relative selectivity (Rao: col. 6, lns. 22-30);

forming at least one new predicate (Rao: col. 6, lns. 30-36); and

appending the query with the at least one new predicate (Rao: col. 6, lns. 60-64).

Regarding Claim 10, Rao discloses the method further comprising the step of performing a query processing operation on a data set with a rewritten query (Rao: col. 6, lns. 37-64).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rao as applied to claims 1-3, 7, 9-10 and 21 above, in view of U.S. Patent Application Publication No. 2003/0167259 by Casson et al. (hereafter Casson).

Regarding Claim 4, Rao disclose the method wherein the step of sampling data records comprises the step of sampling record from the data set, (Rao:).

Rao does not explicitly disclose: that sampling data records is done on every Nth record, wherein N is a positive integer.

However, Casson discloses: that sampling data records is done on every Nth record, wherein N is a positive integer (Casson: pg. 3, [0041]).

It would have been obvious to a person with ordinary skill in the art at the time of invention to modify the teachings of Rao with the teachings of Casson to utilize the numbered record sampling method in the search query system with the motivation to enhance the precision in selection database records for retrieval (Casson: pg. 3, [0039]).

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7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rao as applied to claims 1-3, 7, 9-10 and 21 above, in view of U.S. Patent No. 5,890,150 issued to Ushijima et al. (hereinafter Ushijima).

Regarding Claim 8, Rao discloses the method wherein the step of evaluating the relative selectivity (Rao: col. 6, lns. 18-49):

Although Rao teaches the use of various query refinement and browsing tools using both target and auxiliary attributes (Rao: col. 6, lns. 37-col. 7, lns. 37).

Rao does not explicitly disclose the method to compare a range of statistics from the query results to a range of statistics from the at least a portion of the data set; and

determining whether the one or more auxiliary attributes is a selective attribute by comparing a ratio of the ranges to a predetermined value.

However, Ushijima discloses the method of evaluating the relative selectivity comprises the steps of:

compare a range of statistics from the query results to a range of statistics from the at least a portion of the data set (Ushijima: col. 7, lns. 47-col. 8, lns. 5; col. 15, lns. 31-52); and

determining whether the one or more query attributes is a selective attribute by comparing a ratio of the ranges to a predetermined value (Ushijima: col. 12, lns. 63-col. 13, lns. 2).

It would have been obvious to a person with ordinary skill in the art at the time of invention to modify the teachings of Rao with the teachings of Ushijima to utilize the method to compare a range of statistics from the query results with the motivation to enhance the query result

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evaluation processing with given response time and a precision of the estimated value (Ushijima: col. 4, lns. 39-45).

Response to Arguments

8. Applicant's arguments filed 4/9/2008 have been fully considered but they are not persuasive.

Applicant argues that Rao fails to disclose the feature of "analyzing the query results with respect to the one or more target attributes and the one or more auxiliary attributes to determine a relative selectivity for the one or more auxiliary attributes." However, the Examiner disagrees. Rao discloses in col. 6, lines 60-col. 7, lines 31 that an automatic procedure (or done by the user) is used to reweight, add or remove terms in a subsequent query. Rao further discloses that in scatter/gather and snippet search the focus is on 'browsing' the result set to help refine a query. Therefore, one of ordinary skill in the art would clearly recognize that these teachings of Rao are equivalent to the claimed feature of analyzing the query results with respect to the terms (either used in the query or not exact cluster terms) in order to refine a query. It should be noted that a reference may be relied upon for all that it would have been reasonably suggested to one having ordinary skill in the art, including nonpreferred embodiments. See MPEP 2123 [R-5](1).

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MONICA M. PYO whose telephone number is (571)272-8192. The examiner can normally be reached on Mon & Thur 7:00 - 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu Mofiz can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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